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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,564	12/08/2003	Kevin J. Barefield		4239

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Pennington, Moore, Wilkinson, Bell & Dunbar, P.A.
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EXAMINER

STAIKOVICI, STEFAN

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,564

Applicant(s)

BAREFIELD ET AL.

Examiner

Stefan Staicovici

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-22 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12/08/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Liu *et al.* (US Patent No. 6,230,405 B1).

Liu *et al.* ('405) teach the claimed process for infusing a region of strands in a cable with a resin (liquid potting compound) including, exposing a plurality of wires (8) forming cable (4), positioning said exposed wires (8) into body (12) (anchor), placing said wires (8) and body (12) (anchor) in a mold cavity, injecting plastic material (potting compound) into said mold cavity to thereby infuse said wires (8) and said body (12) (anchor) to thereby secure the cable (4) to the body (12) (anchor) by the molded fixture (14) (see col. 2, lines 33-59 and Figure 5). Further, it is submitted that because Liu *et al.* ('405) teach an injection molding process the mold in said injection molding process must include an infeed runner in order to deliver said plastic material to said mold cavity.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu *et al.* (US Patent No. 6,230,405 B1) in view of Applicants' Admitted Prior Art (APA).

Liu *et al.* ('405) teach the basic claimed process as described above.

Regarding claims 2-4, although Liu *et al.* ('405) teach a cable having a plurality of wires (strands), Liu *et al.* ('405) do not teach splaying said wires (strands) into a fan, cone or radial fan. However, Applicants' Admitted Prior Art (APA) teaches that it is well known to splay the strands (wires) of a cable/rope into a fan, cone or radial fan (see Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to have splayed wires (strands) into a fan, cone or radial fan as taught by Applicants' Admitted Prior Art (APA) in the process of Liu *et al.* ('405) because of known advantages such as improved resin infusion, hence providing for an improved bond and as such as an improved product and also because of its known status.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu *et al.* (US Patent No. 6,230,405 B1) in view of Brown (US Patent No. 3,859,780).

Liu *et al.* ('405) teach the basic claimed process as described above.

Regarding claim 5, although Liu *et al.* ('405) teach a mold cavity, Liu *et al.* ('405) do not teach a separator. Brown ('780) teaches a process for anchoring a cable having a plurality of wires including, providing a spacer for maintaining the wires in a desired position (see col. 2, lines 5-17). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a spacer as taught by Brown ('780) in the process of Liu *et al.* ('405) because Brown

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(‘780) teaches that such a spacer maintains the individual wires (strands) in a specified configuration, hence providing for an improved product.

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu *et al.* (US Patent No. 6,230,405 B1).

Liu *et al.* (‘405) teach the basic claimed process as described above.

Regarding claim 6-7, although Liu *et al.* (‘405) teach an injection molding process, Liu *et al.* (‘405) do not teach a vacuum vent channel. However, the use of a vacuum vent channel in an injection molding process is well known. Therefore, it would have been obvious for one of ordinary skill in the art to provide a vacuum vent channel in the injection molding process of Liu *et al.* (‘405) because of known advantages such as reduced porosity, hence providing for an improved product.

7. Claims 8-13 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu *et al.* (US Patent No. 6,230,405 B1) in view of Hinduja *et al.* (US Patent No. 5,424,017).

Liu *et al.* (‘405) teach the basic claimed process as described above.

Regarding claims 8, 11, 13 and 20, although Liu *et al.* (‘405) teach an injection molding process, Liu *et al.* (‘405) do not teach an injector. Hinduja *et al.* (‘017) teach an injection-insert molding process including an injector (42) having a sealing surface, a pin (needle) (44) and an injecting orifice (43), wherein said injector is clamped against an upper mold (see Figures 1 and 5). Therefore, it would have been obvious for one of ordinary skill in the art to provide the injector of Hinduja *et al.* (‘017) in the process of Liu *et al.* (‘405) because of known advantages such as providing a reduced injection pressure and high speed process and also because, Liu *et*

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al. ('405) teach an injection-insert molding process, hence suggesting the injector of Hinduja *et al.* ('017).

In regard to claims 9, 12, 18-19 and 21, although Liu *et al.* ('405) in view of Hinduja *et al.* ('017) teach an injection molding process, Liu *et al.* ('405) in view of Hinduja *et al.* ('017) do not teach a mold vacuum vent channel or an injector vacuum vent channel. However, the use of a vacuum vent channel in an injection molding process is well known. Therefore, it would have been obvious for one of ordinary skill in the art to provide a vacuum vent channel in the injector or the mold of the injection molding process of Liu *et al.* ('405) in view of Hinduja *et al.* ('017) because of known advantages such as degassing of the infused resin, hence resulting in reduced porosity and as such, providing for an improved product.

Specifically regarding claims 10 and 22, Liu *et al.* ('405) teach positioning said exposed wires (8) into body (12) (anchor) and that said body (12) (anchor) includes a cavity in which plastic material is being injected.

8. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu *et al.* (US Patent No. 6,230,405 B1) in view of Hinduja *et al.* (US Patent No. 5,424,017) and in further view of Applicants' Admitted Prior Art (APA).

Liu *et al.* ('405) in view of Hinduja *et al.* ('017) teach the basic claimed process as described above.

Regarding claims 14-16, although Liu *et al.* ('405) in view of Hinduja *et al.* ('017) teach a cable having a plurality of wires (strands), Liu *et al.* ('405) in view of Hinduja *et al.* ('017) do not teach splaying said wires (strands) into a fan, cone or radial fan. However, Applicants' Admitted Prior Art (APA) teaches that it is well known to splay the strands (wires) of a

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cable/rope into a fan, cone or radial fan (see Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to have splayed wires (strands) into a fan, cone or radial fan as taught by Applicants' Admitted Prior Art (APA) in the process of Liu *et al.* ('405) in view of Hinduja *et al.* ('017) because of known advantages such as improved resin infusion, hence providing for an improved bond and as such as an improved product and also because of its known status.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu *et al.* (US Patent No. 6,230,405 B1) in view of Hinduja *et al.* (US Patent No. 5,424,017) and in further view of Brown (US Patent No. 3,859,780).

Liu *et al.* ('405) in view of Hinduja *et al.* ('017) teach the basic claimed process as described above.

Regarding claim 17, although Liu *et al.* ('405) in view of Hinduja *et al.* ('017) teach a mold cavity, Liu *et al.* ('405) in view of Hinduja *et al.* ('017) do not teach a separator. Brown ('780) teaches a process for anchoring a cable having a plurality of wires including, providing a spacer for maintaining the wires in a desired position (see col. 2, lines 5-17). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a spacer as taught by Brown ('780) in the process of Liu *et al.* ('405) in view of Hinduja *et al.* ('017) because Brown ('780) teaches that such a spacer maintains the individual wires (strands) in a specified configuration, hence providing for an improved product.

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Conclusion

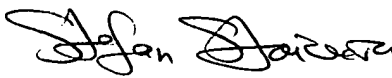
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD


4/1/06
Primary Examiner

AU 1732

April 1, 2006